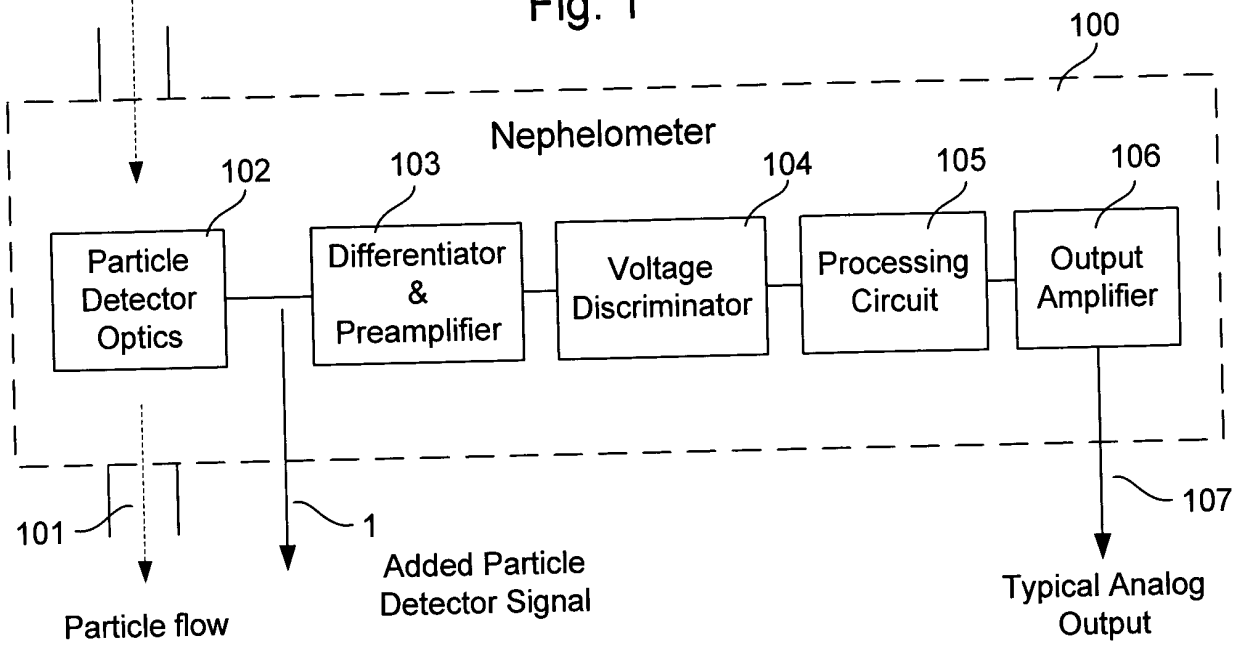
Fig. 1


100
Nephelometer
102
103
104
105
106
Particle Detector Optics
Differentiator & Preamplifier
Voltage Discriminator
Processing Circuit
Output Amplifier
101
1
107
Particle flow
Added Particle Detector Signal
Typical Analog Output

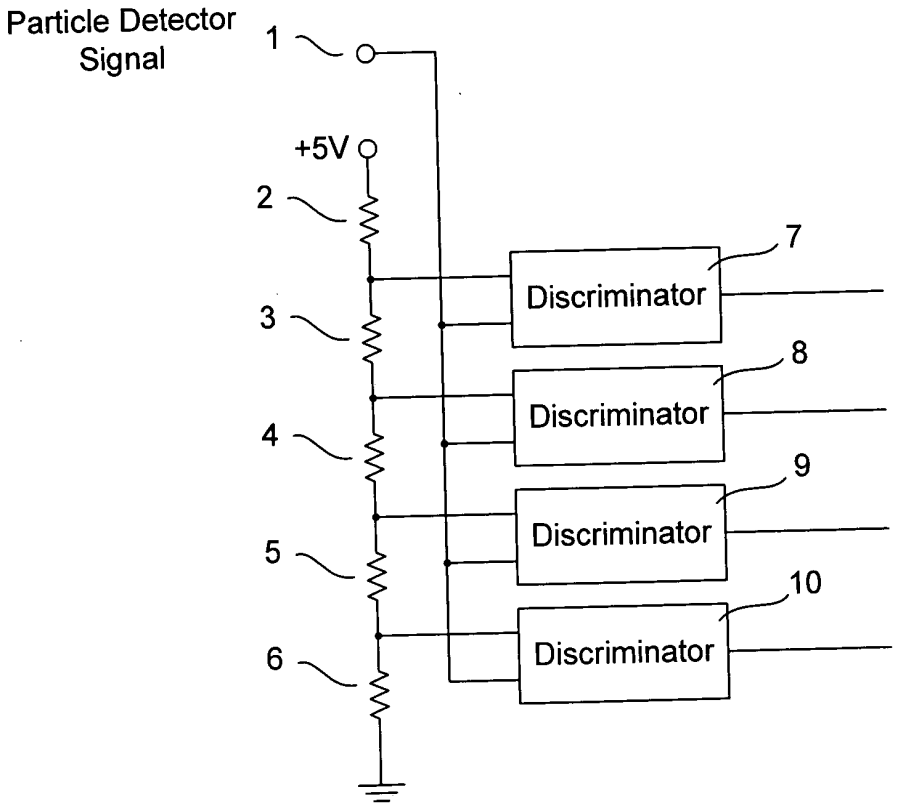

Particle Detector Signal
1
+5V
2
3
4
5
6
7
8
9
10
Discriminator
Discriminator
Discriminator
Discriminator

Fig. 2

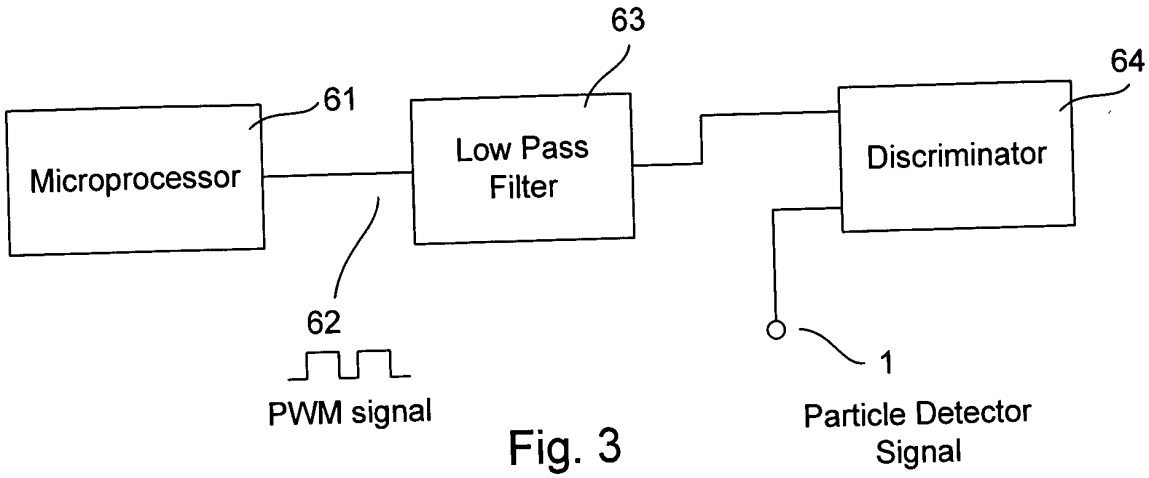

63
64
61
Microprocessor
Low Pass Filter
Discriminator
62
1
PWM signal
Particle Detector Signal

Fig. 3

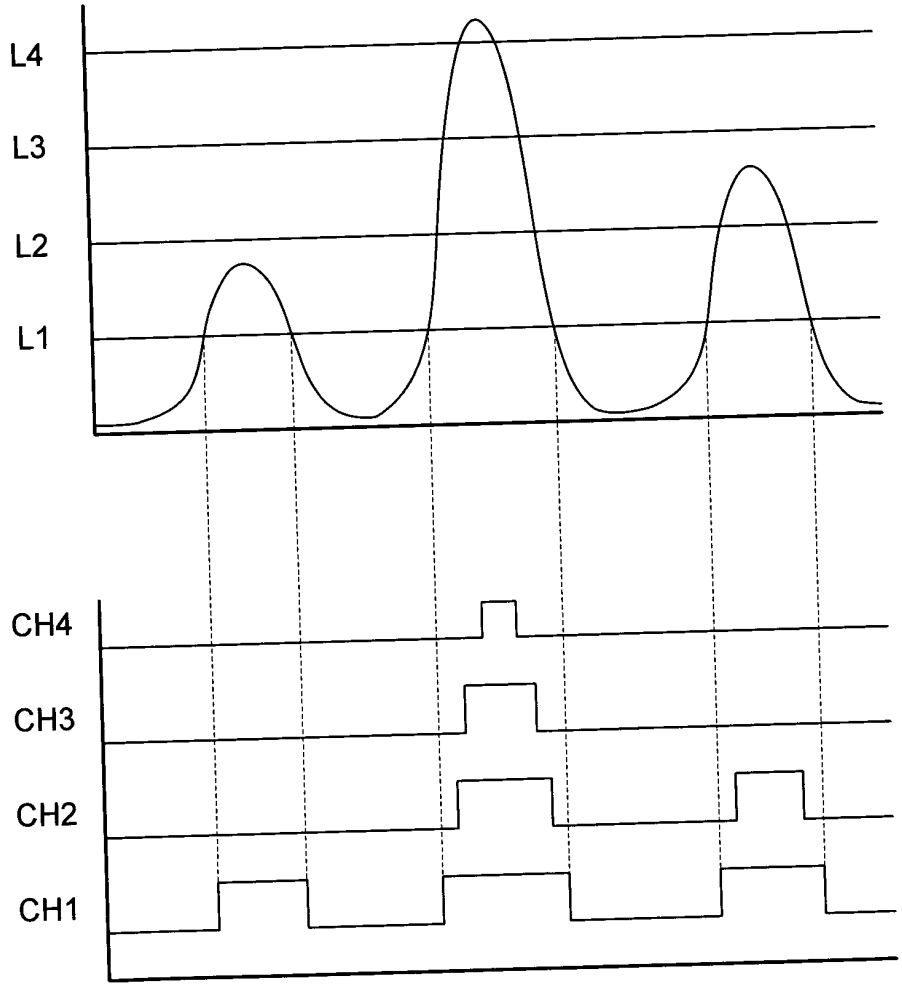

L4
L3
L2
L1
CH4
CH3
CH2
CH1

Fig. 4

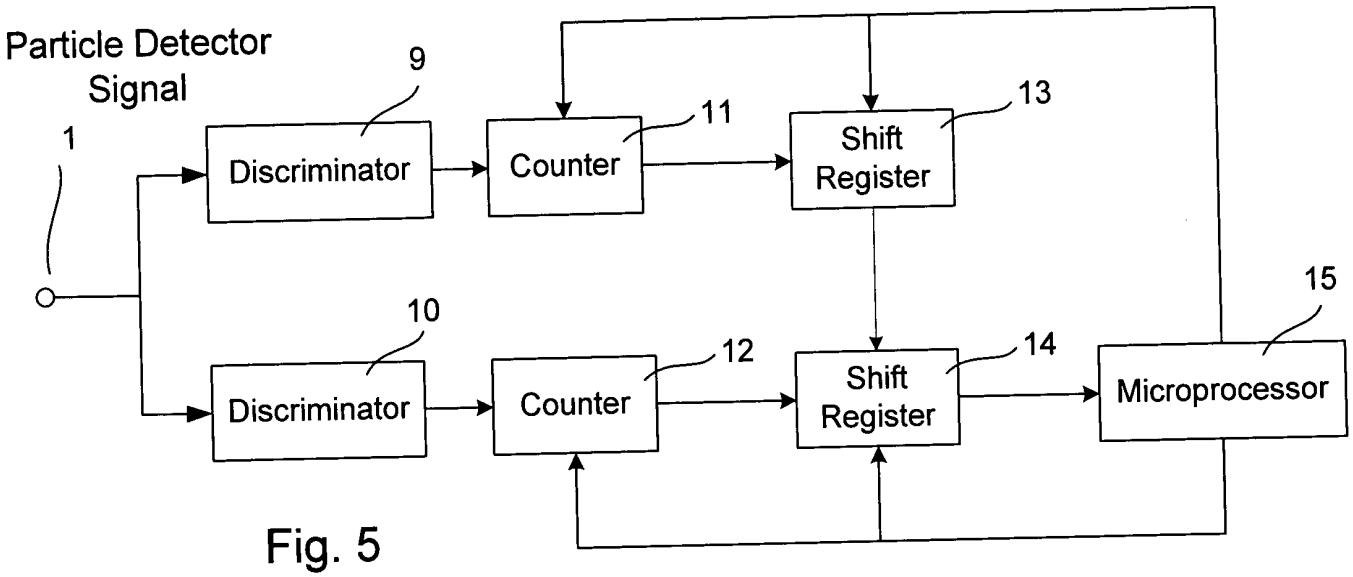



Fig. 5

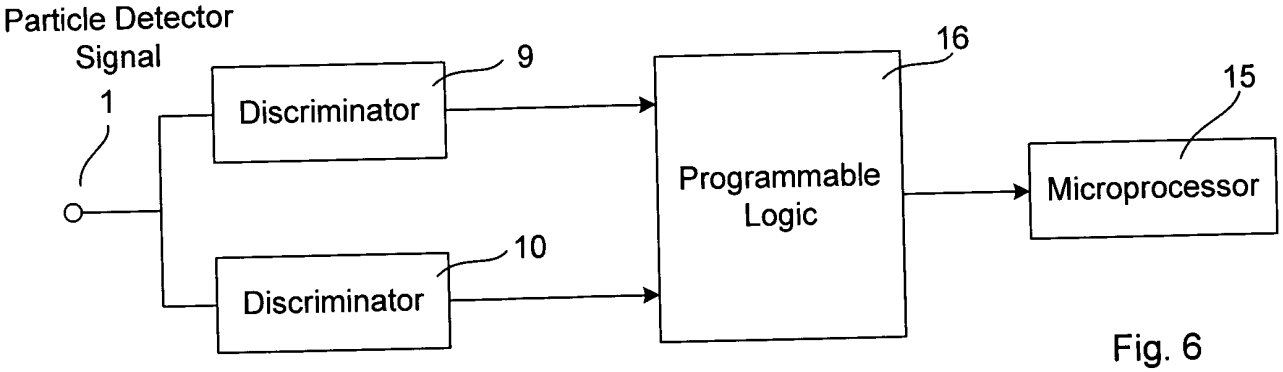



Fig. 6

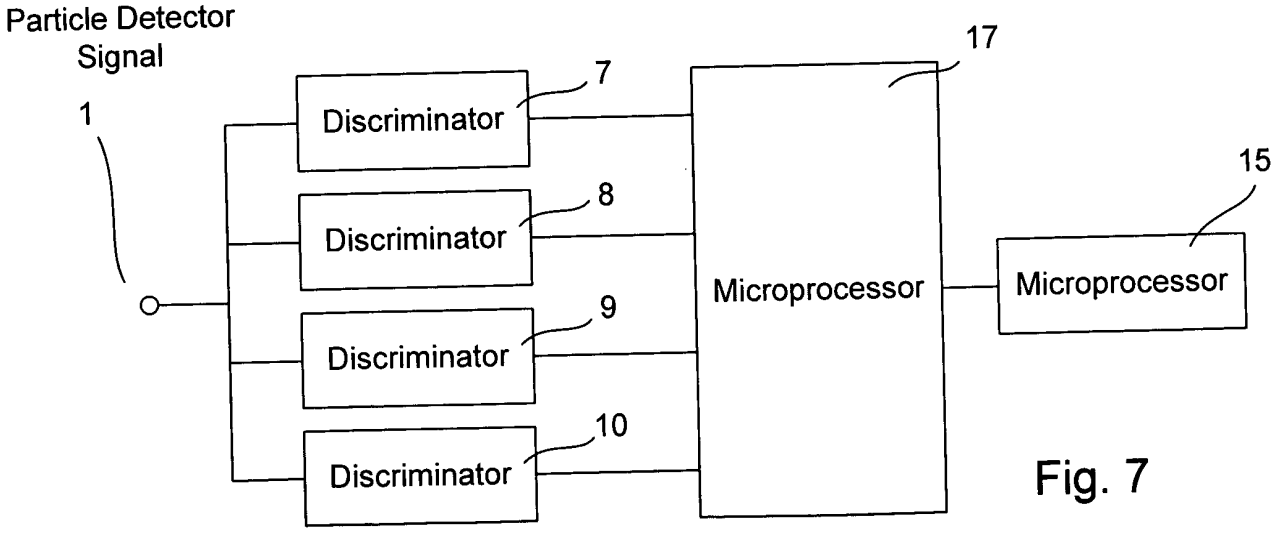



Fig. 7

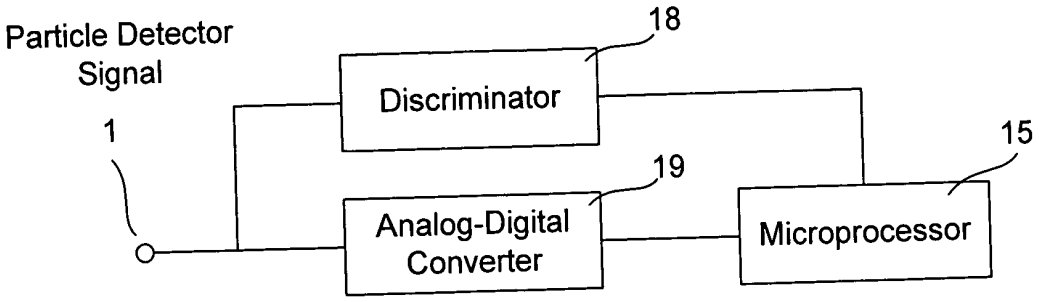

Particle Detector Signal
1
18
Discriminator
19
Analog-Digital Converter
15
Microprocessor

Fig. 8

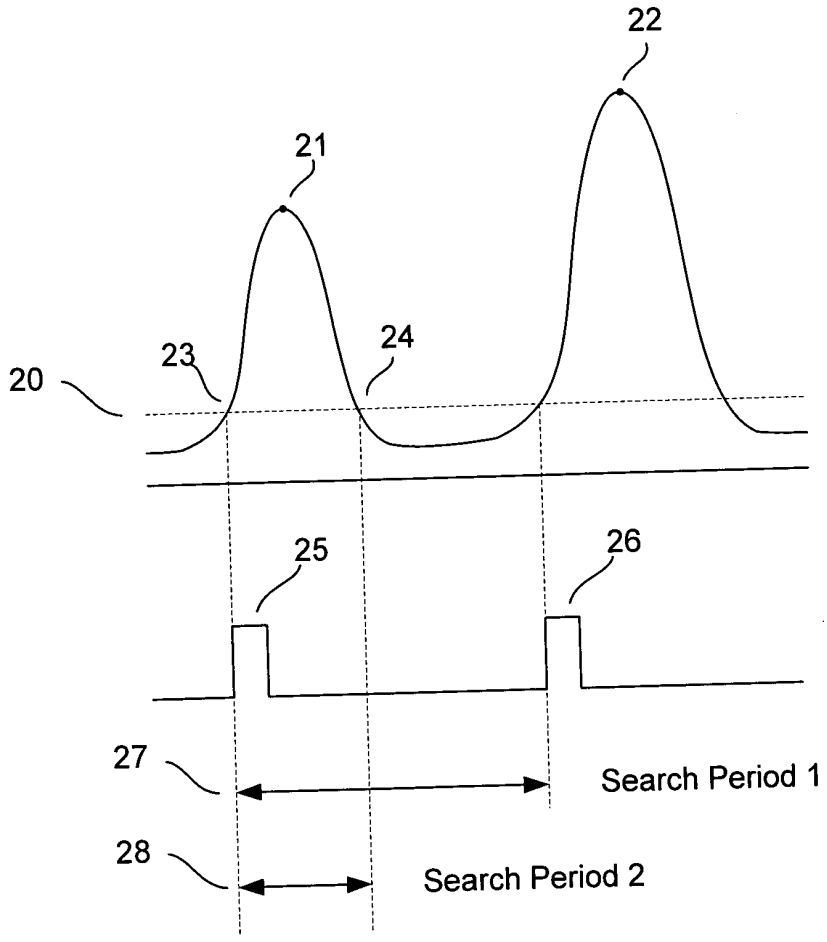

22
21
20
23
24
25
26
27
Search Period 1
28
Search Period 2

Fig. 9

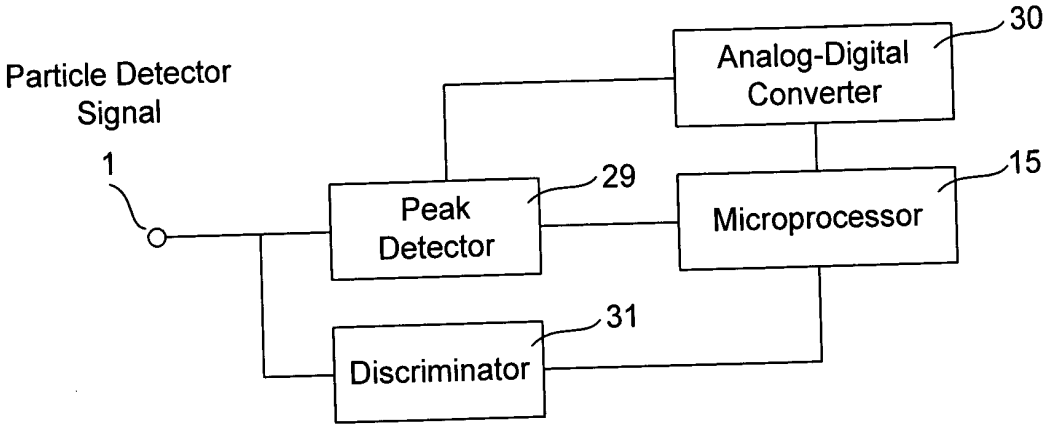

Particle Detector Signal
1
Peak Detector
29
Analog-Digital Converter
30
Microprocessor
15
Discriminator
31

Fig. 10

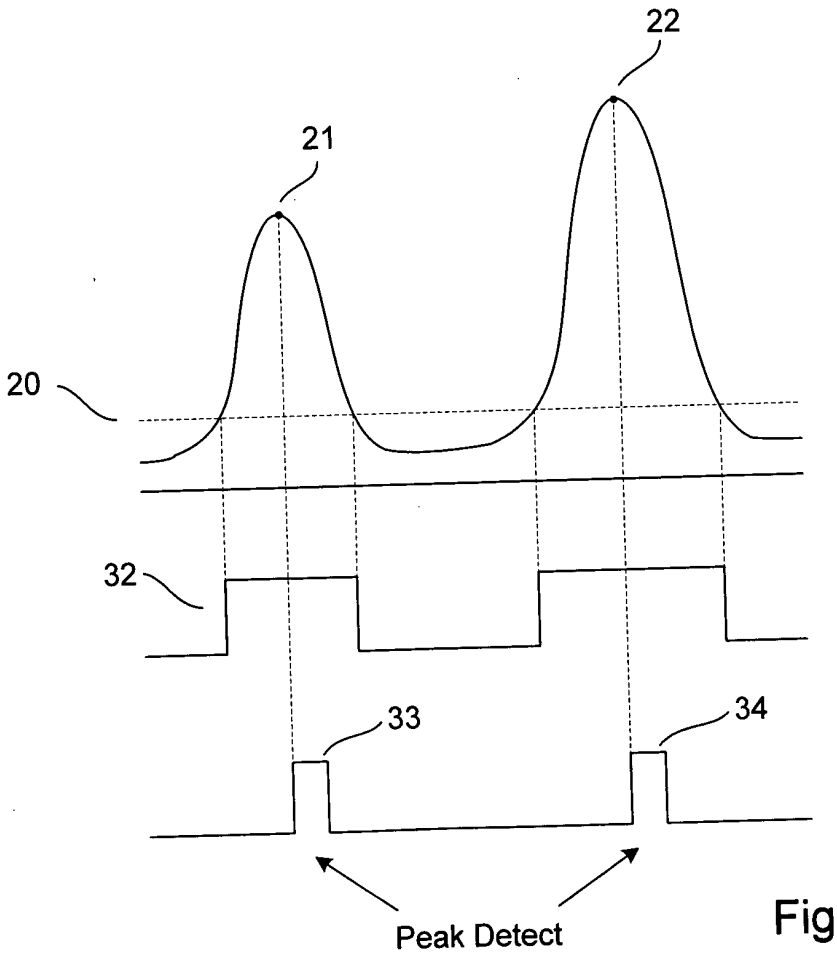

22
21
20
32
33
34
Peak Detect

Fig. 11

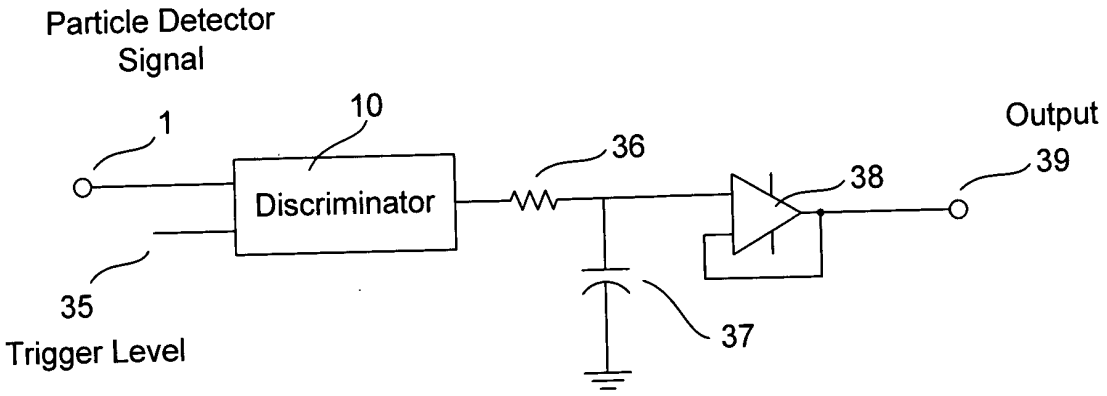

Particle Detector Signal
1
10
Discriminator
36
38
Output
39
35
Trigger Level
37

Fig. 12

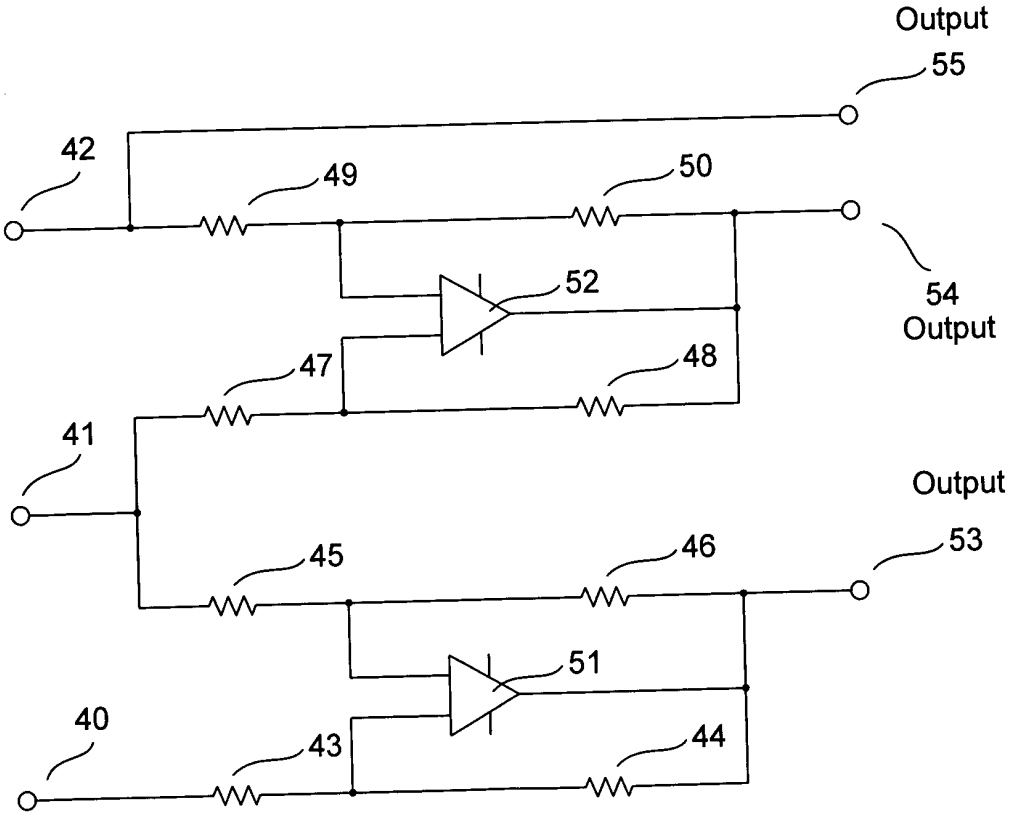

Output
55
42
49
50
52
54
Output
47
48
41
Output
45
46
53
51
40
43
44

Fig. 13

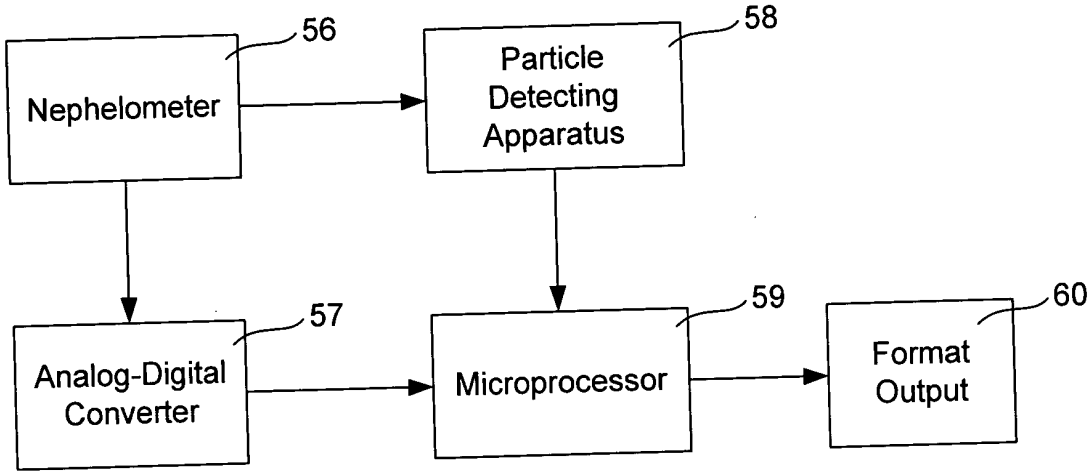

Nephelometer
56
Particle Detecting Apparatus
58
Analog-Digital Converter
57
Microprocessor
59
Format Output
60

Fig. 14